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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/041,633	01/10/2002	Akio Kobayashi	111632	6574

25944 7590 03/28/2006

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EXAMINER

SHAY, DAVID M

ART UNIT PAPER NUMBER

3735

DATE MAILED: 03/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/041,633

Applicant(s)

KOBAYASHI ET AL.

Examiner

david shay

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on January 5, 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-10,13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-10,13 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on January 10, 2007 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>December 7, 2005</u> | 6) <input type="checkbox"/> Other: _____ |

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 5, 2006 has been entered.

The restriction/election requirement in the office action mailed September 30, 2003 is hereby withdrawn.

The drawings are objected to because the elements of Figure 2 are not labeled with indicia indicative of their function. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “laser beam with 1-100 m/cm² of energy density and 1-1000mJ/cm² of the energy output”; the “chip of quartz glass”; “introducing foreign matter”; and “a wall surface of the hollow optical fiber is coated with a metal” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The specification is objected to as containing grammatical errors, and additionally because the Table on page 12 is inconsistent with itself and must be corrected, no new matter should be added.

The amendment filed January 10, 2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "laser beam with 1-100 m/cm² of energy density and 1-1000mJ/cm² of the energy output".

Applicant is required to cancel the new matter in the reply to this Office Action.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 2, 5-10, 13, and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The originally filed disclosure and the disclosure or amended is silent on "laser beam with 1-100 m/cm² of energy density and 1-1000 mJ/cm² of the energy output" lacks antecedent basis in the original specification; "a chip of quartz glass in which hydroxide ions have been introduced" has not been enablingly described in the specification either as to the manner in which the ions are introduced nor the proportion of ions which are introduced; and "the width of each polycapillary bundle element is variable along the length of each polycapillary bundle element."

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 2, 5-10, 13, and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because the exact meaning of the recitation “laser beam with 1-100 m/cm² of energy density and 1-1000 mJ/cm² of the energy output” is unclear as the term “m/cm²” appears to be claiming “meters per square centimeter” which does not make sense, and in any case is not an energy density, while the recitation “1-1000 mJ/cm²” which is an energy density is referred to as an “energy output”. For the purposes of examination, this recitation will be interpreted as “laser beam with 1-100 mJ/cm² of energy density and 1-1000 mJ/cm² of the energy output” as this is consistent with paragraphs [0029]-[0031] of the originally filed disclosure. Claim 2 is indefinite as it appears to fail to further limit the claim from which it depends, as it is unclear how the particular wavelength used manipulatively affects any of the claimed steps, and therefore what further limitation is intended to be implied is unclear. Claims 5, 6, and 14 are indefinite as they appear to fail to further limit the claim from which they depend, as it is unclear how the composition of the coating on the glass chip or optical fiber manipulatively affects any of the claimed steps, and therefore what further limitation is intended to be implied is unclear. Claim 7 is indefinite as it appears to fail to further limit the claim from which it depends, as it is unclear how the particular laser employed manipulatively affects any of the claimed steps, and therefore what further limitation is intended to be implied is unclear. Claims 9 and 10 are indefinite as they appear to fail to further limit the claim from which they depend, as it is unclear how the particular material to be introduced manipulatively affects any of

the claimed steps, and therefore what further limitation is intended to be implied is unclear.

Claim 13 is indefinite as it appears to fail to further limit the claim from which it depends, as it is unclear how the particular inert gas employed manipulatively affects any of the claimed steps, and therefore what further limitation is intended to be implied is unclear.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 5-10, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abela et al ('982) in combination with Matsuura et al (1998) and Lewis et al. Abela et al ('982) teach the method as claimed except for the specific recitation of the use of a hollow fiber, the specific laser energies, or the quartz chip (please note that the absence of the quartz chip implies the absence of other structures predicated thereon, such as the hydroxide groups). Matsuura et al (1998) teaches forming hollow waveguides for the delivery of excimer laser light from hollow fibers that are coated with aluminum and are filled with an inert gas. Lewis et al teaches the desirability of using a wave guiding device with a tapered tip in a medical system and method for applying high energy radiation. It would have been obvious to the artisan of ordinary skill to employ a device and method as taught by Abela et al ('982) in the device and method of Matsuura et al (1998) since Matsuura et al (1998) specifically discloses the desirability of using hollow waveguides in medical applications; or to use the device and method of Matsuura et al (1998) in the device and method of Abela et al ('982), since Abela et al ('982) disclose no particular fibers and since these fibers efficiently transmit high energy radiation while exhibiting

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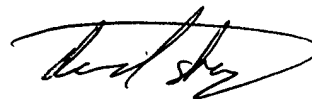
favorable bending radii; and in either case to employ the tapered tip of Lewis et al, since this provides beam sizes in the range required by Abela et al ('982); or to employ the tapered tip of Lewis et al on the waveguide of Abela et al ('982), since this provides beam sizes in the range required by Abela et al ('982), or to employ the device and method of Abela et al ('982) in the device and method of Lewis et al, since Lewis et al disclose drilling through cell walls as a preferred use of the device, and in either case to employ the hollow waveguide of Matsuura et al (1998), since this allows for the transmission of greater energies and avoids the formation of color centers, which is a problem, as taught by Lewis et al; or to provide the method and device of Lewis et al in the method and device of Matsuura et al (1998), since the tapered tip of Lewis et al provides greater energies and or to provide the method and hollow waveguide device of Matsuura et al (1998) in the device and method of Lewis et al, since this would avoid the production of color centers and enable larger energies to be delivered, and in either case to employ the method and device of Abela et al since this is a medical method as suggested by Matsuura et al (1998), which would benefit from the delivery of high energy radiation and since this device and method is useful for drilling into cell walls, as taught by Lewis et al; and in any case, to employ a laser outputting power in the range claimed, since this is necessary to enable the production of the claimed power output by the fiber, is not critical and provides no unexpected result; to employ a chip as claimed, since this condenses the light and is commercially available, as taught at paragraph [0051] of the instant disclosure; to use any of the claimed inert gasses, since these are all well known inert gasses in the art, are not critical and provide no unexpected result, thus producing a method such as claimed.

Applicant's arguments with respect to claims 1, 2, 5-10, 13 and 14 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to david shay whose telephone number is (571) 272-4773. The examiner can normally be reached on Tuesday through Friday from 6:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Bianco, can be reached on Monday through Friday. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DAVID M. SHAY
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